Arthur, 2013) rather than the addition of novel pigmentation. Further documentation and vouchers of odonates with abnormal wing patterns—especially supplementary pigmentation—could shed light on the frequency and distribution of this phenomena. The voucher has been deposited in the University of Michigan Museum of Zoology insect collection.

Acknowledgments

The authors thank Dennis Paulson and Ken Tennessen for their comments on this specimen.

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The Allegheny River Cruiser (*Macromia alleghaniensis*) in Oklahoma

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In many regions in the United States and Canada, the status of *Macromia* species, the river cruisers, is unclear, chiefly because the various species are difficult to distinguish in the field, with correct identity of individuals on the wing challenging at best and often impossible. Even in hand, some individuals are problematic. As an example, we reported (Patten and Smith-Patten, 2014) a putative *M. illinoiensis georgina* × *M. annulata* (the Bronzed River Cruiser) because this individual has the hamules of the former species but the yellow vertex, extensive antehumeral stripes, and abdominal pattern of the latter. We do not know if this individual is instead an aberrant *M. illinoiensis* (Swift River Cruiser), even with a specimen in hand. Add to these difficulties the possibility that some species hybridize (Abbott, 2005: 223) and the lack of clarity is understandable. Positive identification generally requires good images of perched individuals and often requires in-hand examination of structural details—such as, on males, the shape of the hamules or extent of the mesotibial keel—impossible to discern in photographs, let alone on a free-flying individual. Still, a recent spate of high-quality field guides and attendant increases in observer sophistication has combined to advance incrementally our knowledge about the status and distribution of *Macromia* species.

Perhaps a "poster child" for this advancement is *M. alleghaniensis*, the Allegheny River Cruiser, a species easily confused with *M. illinoiensis*, the Swift River Cruiser, of either subspecies (taxonomy per Donnelly and Tennessen, 1994). As observers began to appreciate and discern subtle variation in the pattern of yellow, in particular whether yellow encircled the seventh abdominal segment (S7) completely or nearly so or the yellow antehumeral stripes

were absent or vestigial, *M. alleghaniensis* has been found to have a larger geographic distribution than was long thought. In the mid-2010s alone the species has been added to the faunal lists for Michigan, Connecticut, and Rhode Island (Craves and O'Brien, 2015; Brown and Thomas, 2016). To those states we may add Oklahoma, now the western outpost for the species.

The occurrence of *M. alleghaniensis* in Oklahoma did not come as a surprise given that the venerable Sidney W. Dunkle discovered it at multiple sites in Arkansas in 1984 (Harp and Harp, 1996). The species has since been found several additional times in the same three-county region in the Ouachita Highlands in the west-central portion of that state, not far east of the Oklahoma line, with all records falling between 30 May (J. C. Abbott Collection, JCAC 20132) and 18 July (Harp and Harp, 2003).

High potential aside, the tale of the "first" Oklahoma record was surprising and reads akin to the tale of the first for Michigan (Craves and O'Brien, 2015): two images of a ♂ *Macromia* photographed in hand near Mountain Fork Park, McCurtain Co., 20 June 2012 (OdonataCentral, OC #376227) were submitted as *M. taeniolata* (Royal River Cruiser), but during vetting the identification was changed to *M. illinoiensis georgina*. Subsequent examination of the archived in-hand photographs showed this individual to have had yellow encircling S7, a yellow ring broken at the apex of S2, and a yellow spot at the base of the thorax (rather than an anterhumeral stripe extending half the length of the thorax), characters that indicated *M. alleghaniensis* (Williamson, 1909; Abbott, 2005; Paulson, 2011). This re-identification as *M. alleghaniensis* was confirmed by John C. Abbott when he located the specimen in his collection (JCAC 49444).

Astute readers will have noted the quotation marks above. As it turned out, the "second" record for Oklahoma was actually the chronological first, and in this instance the tale reads akin to that of the first records for New England, in which specimens of *M. alleghaniensis* languished in collections under the wrong name (Brown and Thomas, 2016). The misidentification in this case was remarkable: when Smith-Patten examined a pinned specimen of "*Basiaeschna janata*" (Springtime Darner) in the insect collection at Oklahoma State University, it proved not only to be a *Macromia* rather than a darner, but a ♂ *M. alleghaniensis* (OC 434896). This ♂ was collected "in flight" (as written on the specimen tag) at Jay, Delaware Co., 12 June 1962, and thus predated the McCurtain Co. record by 50 years.

The third record was the first to be recognized as *M. alleghaniensis* contemporaneous with collection: Patten secured a ♂ *Macromia* in the Blackjack Mountains near the entrance to the northwestern unit of Honobia Creek Wildlife Management Area, Pushmataha Co., 19 June 2016. This ♂ was noted initially as it foraged with a small mixed-species swarm—one that included two male *Somatochlora ozarkensis*, the Ozark Emerald—over a dirt road in mixed pine-oak woodland (Smith-Patten/Patten Collection, SP 1980; also OC #447527). It perched in a roadside shrub, where on the basis of the dorsal pattern Patten took it to be *M. illinoiensis georgina*. Yet as soon as he had the individual in hand he noted the yellow ring on S7, the vestigial yellow antehumeral stripe (i.e., mere spots at the base of the thorax), and, with aid of a hand lens, the shape of the hamules and realized it fit *M. alleghaniensis*, an identification confirmed in the lab several days later when we both returned from an extended field excursion.

The three Oklahoma records fall in the narrow window of 12–20 June, and each is from higher-elevation parts in the eastern edge of the state, whether the Ozark Plateau in the northeast (the Delaware Co. record) or the Ouachita Highlands in the southeast (the McCurtain and Pushmataha Co. records). We suspect that *M. alleghaniensis* is a scarce but regular component of Oklahoma's fauna. The species is uncommon to rare in most of its range (Craves and O'Brien, 2015), and its status in Oklahoma may be similar, but we will not know until we obtain more data from *Macromia* of known identity, a daunting task given the difficulty to photograph individuals well or to capture them for in-hand study. Field identification clues are few for a cruiser on the wing, even if *M. alleghaniensis* may have a "slower, more deliberate flight" relative to *M. illinoiensis* (Donnelly, 1961). We urge observers loathe to collect to examine and photograph in hand as many individual *Macromia* as possible, and we urge researchers to examine *Macromia* specimens in collections to determine if other *M. alleghaniensis* have been mislabled.

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Documentation of *Stylurus amnicola* (Riverine Clubtail), a New(?) Species for South Carolina

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Across the southeastern United States, from Louisiana in the West to the Carolinas in the east, *Stylurus amnicola* (Riverine Clubtail) has only been regularly recorded in North Carolina, where it is known historically from 18 counties and in the last half century only from five counties in the the Roanoke River basin in the northern part of the state (Abbott, 2007; H. LeGrand, pers. comm.). There are records from one county in Georgia in 1982 (Beaton, 2007), with subsequent surveys unable to establish continued presence at that site (Giff Beaton, pers. comm.). The first record of the species in Tennessee was an individual photographed in 2015 (Trently, 2015). There are two records from Louisiana (Mauffray, 1997), and Odonata Central (Abbott, 2007) lists no records for Florida, Alabama, Mississippi or South Carolina.

To document odonates in an undersurveyed county, where only 16 species of odonates had previously been documented, on 15 May 2016 Hilda Flamholtz, arranged a trip to some private property near the Congaree River in Calhoun County, South Carolina. The surveyors included hosts Dave and Claire Schuetrum and Dick Watkins, Hilda, Lois Stacey, and Simon and Chris Hill. Our goals were to explore and to document as many species as we could.

At our fourth stop of the day we walked down to a point bar on the Congaree River. I arrived near the river first, and detected a female clubtail in some knee-high plants about 50 feet from the water's edge. Colored in black and yellow but with shiny wings, she was clearly teneral and probably had landed there after a maiden flight. Unlike the *Gomphus dilatatus* (Blackwater Clubtail) and *G. hybridus* (Cocoa Clubtail) we had already encountered, this individual had a small to nonexistent club, and I noticed detached light "sausage" type stripes on the front of the pterothorax, so obtained photographs from several angles to document what I figured would likely be a newly emerged Black-shouldered Spinyleg (*Dromogomphus spinosus*), another species that had not yet been documented in the county. The clubtail flushed while the others of our party were approaching, and despite an effort on all our parts to relocate the it, we never found it, so we continued to the river's edge to document the other species present at the site.

Later inspection of the photographs I obtained showed-features inconsistent with a spinyleg. The photos (Figure 1) showed a short femur, 2/3 pale and with no conspicuous spines. The side of the thorax seemed to have two brown stripes with a clouded area between them. In short, it was clearly a *Stylurus* hanging clubtail. The frontal pattern of slightly divergent stripes with two, three-pointed 'stars' between them indicated *S. amnicola*, Riverine Clubtail. The pattern of the rest of the body matched reference photos of female *S. amnicola* very closely in every respect, and differed from other contender species more expected in South Carolina (e.g. *S. laurae*, Laura's Clubtail). I submitted the photos to OdonataCentral (OC #444819).

Efforts to return to the site the following weekend were stymied by a nine foot vertical rise in the river level, flooding the site. Efforts the weekend after that were again stymied by rainy weather, but on 11 June I returned and among 32 exuviae I picked from the river bank, mostly *Stylurus plagiatus* (Russet-tipped Clubtail) and *Neurocordulia molesta* (Smoky Shadowdragon), I found a single exuvia which keys to *S. amnicola* in the larval keys in Needham et al. (2014) and is a good match in direct comparison to reference exuvia of *S. amnicola* from New Hampshire (Figure 2). In 2017 we hope to return and obtain a voucher specimen of an adult, or perhaps a mature nymph to rear, although the species seems to be scarce judging by the fact